Polyctenium fremontii (S. Wats.) Greene var. ***fremontii***

Fremont's combleaf
Brassicaceae (Mustard Family)

Status: State Threatened
Rank: G4T4S1

General Description: Adapted from Rollins (1993): A perennial herb that grows in small dense clumps and has few to several 2 to 6 in. (5 to 15 cm) long stems from a branching naked caudex. The stems are simple or very rarely branched and sparsely to abundantly hairy with simple or branched trichomes. The basal leaves are sessile, ¼ to ¾ in. (1 to 2 cm) long, pinnately divided into linear divisions, hairy with stiff simple, forked or dendritic trichomes (hairs), and often possess pungent lobes. The stem leaves are similar to the basal leaves: they are sessile, several to many, and ¼ to ½ in. (5 to 12 mm) long. The inflorescences are corymbose and become elongated in fruit. The sepals are oblong, hairless or pubescent, 1/16 to 1/8 in. (2 to 3 mm) long, and 1/32 to 1/16 in. (1 to 1½ mm) wide. The petals are white to pale purple, wedge-shaped, squared off to rounded at the apex, ¼ in. (5 to 6 mm) long, and 1/8 in. (3 to 4 mm) wide. The fruiting pedicels are ascending, pubescent or hairless, and 1/8 to ¼ in. (4 to 8 mm) long. The siliques are linear to very narrowly oblong, usually covered with a removable waxy coating, which gives the surface a whitish or bluish cast. The siliques gradually taper toward the apex, varying in compression from contrary to septum to cylindrical and elongate or very rarely slightly compressed parallel to septum. The styles are less than 1/32 in. (1 mm) long. The stigmas are unexpanded. The seeds are numerous (12 to 28 per silique), marginless, 1/32 in. (1 mm) long, attached by weak connections that are 1/32 in. (1 mm) long.

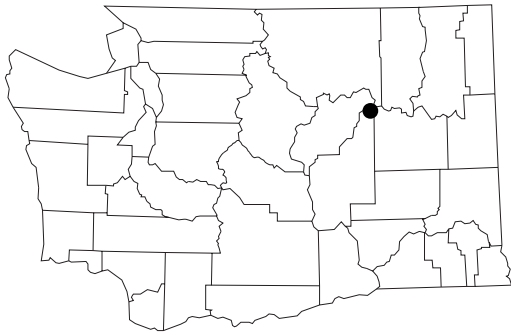
Identification Tips: There are three varieties of *Polyctenium fremontii* found in the Pacific Northwest, but only var. *fremontii* occurs in Washington. These taxa can be distinguished by their siliques. The siliques of var. *fremontii* are linear, tapering toward the apex, less than 1/16 in. (1½ mm) wide, and cylindrical and elongate to somewhat compressed contrary to the septum. The siliques of var. *bisulcatum* and var. *confertum* are oblong, usually not tapering toward the apex, 1/16 to 1/8 in. (1½ to 2½ mm) wide, and strongly compressed contrary to the septum (Rollins 1993).

Phenology: Identifiable from May to June.

Polyctenium fremontii var. ***fremontii***

Fremont's combleaf

Known distribution of
Polyctenium fremontii
var. *fremontii*
in Washington



● Current (1980+)
◎ Historic (older than 1980)

Polyctenium fremontii var. ***fremontii***

Fremont's combleaf

Photo by Alfred Brousseau
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Polyctenium fremontii var. ***fremontii***

Fremont's combleaf

Range: This taxon is found from central Oregon to California and east to central Idaho and Nevada. A disjunct population has been recently found in Washington in Grant County.

Habitat: *Polyctenium fremontii* var. *fremontii* grows in gravelly clay, sagebrush desert, damp or wet meadows, near shallow ponds, stony swales, dried vernal pools, and banks and beds of vernal streamlets. In Washington, Fremont's combleaf occurs on a plateau, close to a road in the shallow silty loam soil of a vernal pond depression within sagebrush steppe and lithosol communities at an elevation of 2300 ft (701 m).

Ecology: This taxon prefers somewhat compacted soils in moist areas within dry ecosystems. It tolerates extreme moisture conditions and seasonally wet conditions.

State Status Comments: The taxon is known from one recent occurrence in Grant County. Very little is known about this population.

Inventory Needs: Moist areas within sagebrush steppe in Grant County should be systematically surveyed for additional populations.

Threats and Management Concerns: Definite threats have not been identified for this species. However, the small range of this taxon in Washington and the small number of known occurrences are major concerns. Any disturbance to the immediate habitat, such as grazing, development, and recreational activities, may constitute a threat.

References:

Rollins, Reed C. 1993. *The Cruciferae of continental North America: systematics of the mustard family from the Arctic to Panama*. Stanford University Press. Stanford, CA. 976 pp.

Hitchcock, C.L., A. Cronquist, M. Ownbey, J.W. Thompson. 1964. *Vascular Plants of the Pacific Northwest* Part 2: *Salicaceae to Saxifragaceae.* University of Washington Press, Seattle, WA. 597 pp.

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